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(54) Title: COMPOSITIONS AND METHODS FOR TREATMENT AND PROPHYLAXIS OF INFECTIONS CAUSED BY GRAM POSITIVE BACTERIA

(57) Abstract: The invention relates to methods of treatment, compositions and uses of an isolated and purified peptide for the inhibition of an invasive and/or non-invasive infection of Gram-positive pathogenic bacteria. A specific peptide comprises an amino acid sequence substantially homologous to the amino acid sequence encoded by the *sil*CR ORF of the *sil* locus at position 2985 to 2863 of the complementary strand of the genomic sequence of Group A Streptococcus (GAS) bacteria specified in GenBank accession number AF493605. Preferably, the peptide of the invention comprises an amino acid sequence DIFKLVIDIISMKARKK, also denoted by SEQ ID NO: 32 or any functional fragment, analog or derivative thereof. The invention further relates to methods for inhibiting an invasive and/or non-invasive infection of Gram-positive pathogenic bacteria, using an agent such as the peptide of the invention, which induces down regulation and/or inhibition of chemokine protease activity.